



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**THE EFFECT OF EXECUTIVE ORDER 13269 ON
NONCITIZEN ENLISTED ACCESSIONS IN THE U.S.
MILITARY**

by

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March 2013

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REPORT DOCUMENTATION PAGE
Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 2013	3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE THE EFFECT OF EXECUTIVE ORDER 13269 ON NONCITIZEN ENLISTED ACCESSIONS IN THE U.S. MILITARY		5. FUNDING NUMBERS
6. AUTHOR(S) Huseyin Yalcinkaya and Melih Can		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB Protocol number: NPS.2013.0021-IR-EP5-A.		
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		12b. DISTRIBUTION CODE A

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The results of the regression analysis show that the decrease in noncitizen accessions is greater than the decrease in citizen accessions after the executive order was implemented. The results of the analyses conducted by using data on the services support these results, except for the Coast Guard.

We conclude that the executive order either had no effect or a negative effect on noncitizen enlisted accessions to the military, and we propose several policy recommendations to improve the effectiveness of the executive order.

The first recommendation is to establish an effective way of recruiting noncitizens by briefing the recruiters in the Services about the executive order and its current benefits to the United States and to noncitizens. After looking at news articles to see how Executive Order 13269 was perceived and debated within society, we recommend expanding the efforts to advertise the executive order since most discussion of the order is negative. The benefits provided by the executive order should be broadened to include family members, while some requirements might be loosened to attract more noncitizens.

14. SUBJECT TERMS Noncitizens, Immigrants, Naturalization, Immigration and Naturalization Act, INA, Expedited Citizenship, Executive Order 13269, Recruiting		15. NUMBER OF PAGES 77
16. PRICE CODE		
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified
		20. LIMITATION OF ABSTRACT UU

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Approved for public release; distribution is unlimited

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ACCESSIONS IN THE U.S. MILITARY**

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MASTER OF SCIENCE IN MANAGEMENT

from the

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LIST OF ACRONYMS AND ABBREVIATIONS

ACS	American Community Survey
API	American-Pacific Islander
CPS	Current Population Survey
DD	Difference in Difference
DHS	Department of Homeland Security
DMDC	Defense Manpower Data Center
DREAM Act	Development, Relief, and Education Act for Alien Minors
EO	Executive Order
FY	Fiscal Year
GWOT	Global War on Terror
INA	Immigration and Naturalization Act
MAVNI	Army's Military Accessions Vital to the National Interest
NDAA	The National Defense Authorization Act
OLS	Ordinary Least Square
USC	United States Code
USCIS	U.S. Citizenship and Immigration Services
WWI	World War I

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ACKNOWLEDGMENTS

First and foremost, we would like to present our gratitude to our country, Turkiye, for providing us this great opportunity to study and acquire a degree at a distinguished school and live at one of the loveliest places in the world. We would like to acknowledge those who supported and guided us with their deep academic reasoning and knowledge during our education and thesis creation process. We express our sincere appreciation to our thesis advisors Professor Jesse Cunha and Professor Ryan Sullivan for their patience, valuable guidance, continuous and comprehensive feedback and priceless contributions. Finally, we want to thank our families for their patience, understanding and support during our tough education at Naval Postgraduate School.

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I. INTRODUCTION

The readiness of the armed forces strongly relies on the level of manning as well as some other factors such as training, manpower quality, and technology (Cyrulik, 2004). Considering the current roles assumed by the U.S. military at home and in the international arena—homeland security, deterrence missions around the world and the operations in Afghanistan, Iraq, and the Balkans—together with the ongoing conflicts within nations and between nations and continuing terrorist activities all over the world, the need for the expansion of the armed forces, or at least maintaining the current level of manning, is projected to remain as one of the challenges the military should deal with in the foreseeable future (Cyrulik, 2004). Recruiting and retaining service members are the two major components of maintaining and improving the manpower level of the armed forces (Congressional Budget Office [CBO], 2006).

After the implementation of an all-volunteer force in the U.S., different policies were implemented to attract the people of the country to fulfill the recruiting goals of the military. Much research has been conducted to measure the effectiveness of these policies. When fulfilling manpower requirements, the armed forces must consider every possible source to attract more qualified recruits. Noncitizens can be considered as one of these specific sources. Noncitizens compose an important and valuable pool of applicants for recruiters for several reasons, including the following: Noncitizens have cultural backgrounds and language skills that would improve diversity in the armed forces; they have superior performance in the military, as expressed in retention and attrition rates when compared to U.S. citizens; and recruitable noncitizen population is increasing (McIntosh, Sayala, & Gregory, 2011).

Throughout the history of the U.S., the flow of people in search of better opportunities has never stopped. During wars and conflicts in U.S. history, considerable numbers of people coming to the U.S. have helped to respond to the manpower needs of the military. The service history of noncitizens and

immigrants in the U.S. military goes back to the Revolutionary War (Plascencia, 2009). Noncitizens have made valuable contributions in the forming of a new nation and establishing the security and welfare of the country by serving in the armed forces since the Revolutionary War (Stock, 2009). Awarding citizenship in return for military service has been a tradition since that time (Plascencia, 2009).

A. THE PURPOSE OF THE STUDY AND RESEARCH QUESTIONS

The purpose of this study is to assess the number of noncitizen accessions in the U.S. military before and after the implementation of Executive Order (EO) 13269 issued on July 3rd, 2002, by President George W. Bush, and to find out the effect, if any, of the EO on noncitizen accessions. The primary research question for this study is as follows: Did the enactment of EO 13269 improve the number of noncitizen accessions to the U.S. military? The secondary research questions are the following: What is the value of noncitizens as sources of manpower? Do noncitizens take into consideration the value of becoming a U.S. citizen when making enlistment decisions?

B. OUTLINE OF THE STUDY

In the second chapter of this thesis, we provide background to better understand the main goal of the research. We cover historical information on noncitizens, the importance of noncitizens to the military and current legislation awarding citizenship to noncitizens through military service. In the third chapter, we provide information and a thorough preliminary analysis of the data used in the study. In the fourth chapter, we introduce the method and models used for the analysis of the data. In the fifth chapter, we present the findings of the analysis and discussions on the results. In the last chapter, we provide the conclusions of the study and recommendations of the authors.

II. BACKGROUND

A. THE HISTORY OF IMMIGRANTS IN THE U.S.

It would not be erroneous to call the United States “a nation of immigrants” (Wong & Cho, 2007). Beginning with the first settlers who traveled through the passage between Asia and North America, people have been coming to the American continent throughout history. But more specifically, the rise of the United States as a new nation is attributed to the Europeans, led by the Spanish and French, who established settlements on the continent by the 1500s (*United States Immigration Before 1965*, 1996–2013). Therefore, people who are now considered the “true owners” of the country can be traced back to immigrants who came to the American continent at some point from different locations of the world, which justifies calling the U.S. “a nation of immigrants” (Wong & Cho, 2007). Later, the descendants of immigrants became the new “natives” of the country, regardless of where their ancestors came from, leaving the term *immigrant* to the newcomers who were born in another country and came to settle in the United States.

The history of immigrants in the United States can be divided into four periods beginning with the arrival of European explorers and the first European settlers who supposedly laid the foundations of the U.S. in the American continent (DeSipio & de la Garza, 1998). The first period can be identified as the free and open immigration era that covers the time from the first settlements of the European immigrants to the 1840s (Smith, 2009). Northern Europeans exploring the American continent and African slaves who were forced to accompany them were the pioneers. In this era, the main incentives of the economically depressed immigrants, attracted by economic opportunities offered in the New Lands, were jobs and fertile lands (Smith, 2009). By 1840, the population of the states reached about 17 million (“1840 Fast Facts,” 2012). Between 1820 and 1840, about 750,000 immigrants came to the U.S. (Immigration to the United States, 1789–1930, n.d.).

The second period (1840–1880) is known as the industrial immigration era (DeSipio & de la Garza, 1998), characterized by “mass immigrations due to crop failures in Germany, social turbulence triggered by the rapid industrialization of European society, political unrest in Europe, and the Irish Potato Famine (1845–1851)” (Immigration to the United States, 1789–1930, n.d.). The estimated number of immigrants to the U.S. during this period is four million, according to the U.S. Citizenship and Immigration Services (USCIS; O’Neil & Senturk, 2004). The foreign-born population increased from about 2.25 million in 1850 to 6.7 million in 1880, comprising 13.3% of the U.S. population (Gibson & Jung, 2011).

The third period (1880–1920) has been represented as another great wave of industrial immigration, during which an estimated 26 million new immigrants entered the U.S. (O’Neil & Senturk, 2004). Although the earlier immigrants who later became the natives of the country generally accepted these new people when the economy was strong, in times of economic hardship, people often had different reactions, leading to anti-immigrant feelings (Singer, n.d.). At the end of this period, the intense disapproval of immigrants was growing. This was reflected in the attitude of earlier settlers of the time, who blamed Southern and Eastern Europeans for being “radicals and undesirables who could never become truly American” (Singer, n.d.). As a result of this unrest, legislation imposing quotas on the number of immigrants was passed in 1921 and 1924 (Singer, n.d.). Between the years 1920 and 1965, international immigration, which was restricted due to the quotas on immigration and public disapproval of immigrants, was replaced by internal immigration (Singer, n.d.).

The fourth period (1965 to the present) can be called the post-industrial immigration era, which produced 25 million immigrants (O’Neil & Senturk, 2004). In 1965, millions of new immigrants had a chance to enter the U.S. after the revision of the immigration laws. During this period, the number of undocumented immigrants also increased (DeSipio & de la Garza, 1998). There were an estimated 11.5 million undocumented immigrants in the U.S. as of January 2011,

according to the Department of Homeland Security (DHS) annual report (Hoefer, Rytina, & Baker, 2012). The 2010 American Community Survey (ACS) revealed that the foreign-born population in the U.S. was about 37.5 million, comprising 13% of the total U.S. population. Approximately 21.5 million of the foreign-born population is non-U.S. citizens ("Current Population Survey," 2012).

In conclusion, the history of immigrants is presented very briefly here to show that the flow of people to the U.S. has continued throughout its history. Despite the regulations of Congress and public reaction against immigration, the U.S. still continues to attract people from all over the world, and immigration remains a significant source of population growth in the U.S.

B. HISTORY OF NONCITIZENS AND AWARD OF CITIZENSHIP THROUGH SERVICE

The continuous flow of people to the U.S. throughout its history led to inevitable interactions between these people and the U.S. military. During the wars and conflicts of U.S. history, considerable numbers of people coming to the U.S. helped to respond to the manpower needs of the military.

The service history of the noncitizens and immigrants in the U.S. military goes back to the Revolutionary War (Plascencia, 2009). Noncitizens have made valuable contributions in the formation of a nation in the Americas. Awarding citizenship in return for military service has been a tradition since the Revolutionary War (Plascencia, 2009). More than 660,000 military veterans have been naturalized through congressional legislation since 1862 (O'Neil & Senturk, 2004).

During the Revolutionary War, citizenship was set as an incentive to attract both noncitizens and enemy soldiers. Some states' militias offered state citizenship to noncitizens (Wong & Cho, 2007), while the Continental Army offered citizenship to enemy soldiers who agreed to switch sides (Franklin, 1906).

By the 1840s, 47% of the Army's enlistees were immigrants and many of them fought in the Mexican–American War (Weigley, 1967). In this period, non-declarant aliens were eligible for conscription by the Union forces but congressional legislation narrowed the eligibility of conscription to only declarant aliens in 1863. However, in 1864, the wave turned again and any non-declarants who had voted or held public office became eligible to enlist (Jacobs & Hayes, 1981).

The rise of anti-immigrant sentiment between 1880 and 1920 resulted in congressional legislation that required peacetime enlistees to be able to read, write, and speak English. An enlistee had to be a U.S. citizen or to declare "his intention to become one" (O'Neil & Senturk, 2004). Yet, non-declarants were again accepted to serve in the military during World War I (WWI), which demanded giant manpower to satisfy the needs of the war. Nearly 18% of Army enlistees were immigrants from 46 different nations (O'Neil & Senturk, 2004).

The anti-immigrant reaction was provoked again after WWI and non-declarant alien enlistment was prohibited. About 80,000 military members were naturalized between the two world wars (O'Neil & Senturk, 2004). World War II increased the need for manpower dramatically, and immigrants including non-declarant aliens became eligible to enlist (Jacobs & Hayes, 1981). Over 109,000 noncitizens joined the Army between 1940 and 1945 (Miller & Auerbach, 1948). In 1948, declarant aliens were again permitted to serve due to increasing Cold War manpower requirements (Jacobs & Hayes, 1981). The Immigration and Naturalization Act (INA) of 1952 expanded citizenship eligibility for noncitizens including the individuals who served during wartime, regardless of being lawfully present in the country or not (O'Neil & Senturk, 2004). The 1968 amendment of the INA allowed immigrants who served in the armed forces in the Vietnam War to attain citizenship (O'Neil & Senturk, 2004). Executive Order 12081, issued in 1978, and Executive Order 12939, issued in 1994, allowed the naturalization of noncitizens that served during the Vietnam conflict and the Gulf War, respectively (Goring, 2011).

As explained previously, immigrants have made great contributions to the security and welfare of the U.S. by serving in the armed forces since the Revolutionary War (Stock, 2009). The need for manpower affected Congress' and society's attitudes toward immigrants. Many acts of legislation have awarded citizenship to noncitizens for their contributions to the U.S., while providing the armed forces with an adequate supply of manpower, creating a win-win scenario for both parties.

C. WHY NONCITIZENS ARE IMPORTANT

Noncitizens provide an important and valuable pool of applicants for recruiters for several reasons. The characteristics of noncitizens and the role of the U.S. and its military power as a political tool around the world increases the need for noncitizens (McIntosh, Sayala, & Gregory, 2011).

1. Noncitizen Population

In 2011, McIntosh, Sayala, and Gregory analyzed the noncitizen population in the U.S. using data from the ACS and the Current Population Survey (CPS) in a report prepared for the Center for Naval Analyses. They found that there were 7 million noncitizens in the age range of 18 to 29 years. By applying the requirements for noncitizens to enlist in the military—being legal permanent residents, being high school graduates, and being able to speak English well—to the data, they found that there were an estimated 1.2 million noncitizens who have the necessary qualifications for enlistment. When compared to an overall population of 42 million who are eligible to enlist, this number might seem relatively small; however, it is still large enough to support the achievement of the end strength goals of the Services with a more focused recruiting strategy. Additionally, the importance of noncitizens as a source of recruits will keep increasing because immigrants are projected to be the major source of future population growth amongst young people between the ages of 18 and 24.

2. Individual Characteristics

In this section, we present the benefits of incorporating noncitizens to military through the findings of several studies focused on the performance of enlistees. O’Neil and Senturk (2004) found that noncitizens have an average first-term attrition rate that is 9 percentage points lower than the average rate for citizens, and the average rate of retention beyond the first term is 10 percentage points higher for noncitizens than for citizens. The average rate of promotion to E-4 is nearly 2 percentage points higher for noncitizens. Also, attrition rates are significantly lower in all Services ranging from 16 percentage points (Navy) to 10 percentage points (Air Force) lower than citizens. Also, noncitizens have estimated retention rates ranging from 10 percentage points higher (Navy) to 6 percentage points higher (Marine Corps) than do citizens. Moreover, noncitizens have a significantly higher estimated probability of promotion to E-4 in all four Services. Their predicted promotion rates ranged from 6.5 percentage points higher (Marine Corps) to 2.4 percentage points higher (Air Force) than citizens.

Hattiangadi, Quester, Lee, Lien, & MacLeod (2005) found that noncitizens had three-month attrition rates, which were lower than those of citizens. They analyzed the accession data covering fiscal year (FY) 1988 and FY2003 by separating the data into two periods, one from FY1988 to FY1994 and the other from FY1995 to FY2003, to be able to see the behavioral changes. They found that three-month attrition rates of noncitizens are 1.8 percentage points lower in the earlier period, and 3.7 percentage points lower in the more recent period.

These statistically significant results showed that Black, American-Pacific Islander (API), and Hispanic noncitizens were predicted to have three-month attrition rates that were 7 to 8 percentage points below those for White citizens. All else equal, White and other noncitizens were predicted to have three-month attrition rates of 3.3 and 5.8 percentage points below those of White citizens.

Hattiangadi et al. (2005) reported that 36-month attrition rates for citizens and noncitizens were 32.2% and 18.7%, respectively. Other things equal, noncitizens had 36-month attrition rates that were 9 to 20 percentage points lower than White citizens. Again, most noncitizens are Hispanic or API; these noncitizen recruits have 36-month attrition rates 16.5 and 20 percentage points, respectively, below White citizens.

McIntosh et al. (2011) also found results compatible with the findings of the studies mentioned previously. They found that the attrition rates of the noncitizen enlistees were less than their counterparts (3 months, 36 months, and 48 months after accession) in the military, even after controlling for demographic and service-related characteristics that likely affect attrition.

In addition to the benefits brought by relatively better adaptation of noncitizens to military life, as demonstrated by the findings of the studies cited earlier in the section, the military also benefits from the diversity that noncitizens bring with them. First, language and cultural skills inherited by the noncitizens are of strategic interest to the U.S. military considering the locations in which U.S. troops are deployed all over the world (McIntosh, Sayala, & Gregory, 2011). As Stock (2009) explained, “Without the contributions of immigrants, the military could not meet its recruiting goals and could not fill its need for foreign-language translators, interpreters, and cultural experts.” Secondly, the presence of noncitizens contributes to the cultural knowledge base of the military and improves the understanding of its members encountering various situations while serving around the world (Malfatti-Rachell, 2008)

3. Economic and Political Factors

As the economy improves and the unemployment rate decreases, recruiters face shortages in finding qualified manpower (Warner, 2012). The valuable noncitizen pool may help recruiters meet their goals. Although the

recruitable noncitizens pool might be small compared to the overall recruitable population, noncitizens are still a key recruiting resource (McIntosh, Sayala, & Gregory, 2011).

The United States military is the primary instrument of American foreign policy as the nation enters the 21st century (Cyrulik, 2004). As explained by Adams (2007) "The U.S. approach to the future of global security is almost entirely military in nature. The United States is moving toward reliance on its military instrument for the future of its security." The end of the Cold War affected the number of deployments and the operational tempo of the armed forces. Keeping the armed forces ready at the desired level has required more manpower. 9/11 and the initial campaigns of the Global War on Terror (GWOT) have further increased the demand. The Services' vast scope of missions—homeland security, deterrence missions around the world, and the operations in Afghanistan, Iraq, and the Balkans—have started a debate about the appropriate size of the force. Many people have made efforts to increase the number of units and the end strength of the Services (Cyrulik, 2004). Although the technological shift may seem to reduce the need for manpower, manpower will always remain as a central issue.

Considering the manpower demand of the military with regards to its role, as explained previously, John M. Cyrulik (2004) advised that the United States Armed Forces should actively recruit skilled noncitizens overseas through the promise of American citizenship as a reward for their service in his monograph. Considering the current roles assumed by the U.S. military in the international arena, together with the ongoing conflicts within nations and between nations and continuing terrorist activities all over the world, the need for the expansion of the armed forces, or at least maintaining the current level of manning, is projected to remain one of the challenges for the military in the foreseeable future (Cyrulik, 2004).

4. Social Aspects

Because some noncitizens are undocumented and living without being legally present in the U.S., one way to adapt noncitizens to society is to allow them to serve in the military, which would provide lawful employment and training opportunities. This can provide significant benefits for society and for the noncitizens (Goring, 2011).

D. INSTITUTIONAL DETAILS

1. Process for Attaining U.S. Citizenship

The most common paths to U.S. citizenship for foreign nationals are through family sponsorship and military service (“Path to U.S. Citizenship,” 2013). The Department of Homeland Security (DHS) oversees the application process. In 2011, the DHS granted U.S. citizenship to a total of 694,193 foreign nationals (Lee, 2012). A typical foreign national applying for U.S. citizenship must meet several DHS requirements. The requirements include being 18 years of age or older; holding a green card for at least five years; being able to read, write, and speak the English language; being able to demonstrate a basic knowledge of U.S. government and history; having continuous residence in the United States, from the date of application until the time of naturalization; and being a person of good moral character (Lee, 2012; “Path to U.S. Citizenship,” 2013).

Foreign nationals often encounter delays in their quests for U.S. citizenship, which is mainly due to the limited number of green cards that the DHS issues per year.¹ U.S. law, for example, caps the number of family-sponsored green cards at 480,000 per year (Giller [last name withheld], personal

¹ Foreign nationals may obtain green cards through a number of channels, such as family sponsorship, employment and humanitarian means, including being a victim of human trafficking, a refugee, an informant, and so forth (“Other Ways to Get a Green Card,” 2013). The processing time varies greatly depending on the type of applicant. In general, family-sponsored green cards take about 11 years to process, whereas employer-sponsored green cards take roughly two years (Giller [last name withheld], personal communication, June 17, 2011; Mary [last name withheld], personal communication, June 13, 2011; *Visa Bulletin for June 2011*, 2011). According to 2010 DHS figures, after receiving their green cards, foreign nationals applying for U.S. citizenship spend a median of six years waiting for the completion of the citizenship application process (Lee, 2012).

communication, June 17, 2011; Monger & Yankay, 2012; “The Number of Green Cards,” 1999; Immigration and Nationality Act [INA], 1996, subch. II) Similarly, U.S. law permits a maximum number of 140,000 employment-sponsored green cards, plus any unused family-sponsored applicants from the previous year (Giller [last name withheld], personal communication, June 17, 2011; INA, 1996, subch. II; “The Number of Green Cards,” 1999). In 2010, the law capped employment-sponsored green cards at 150,657 (Monger & Yankay, 2012). Immediate relatives of U.S. citizens (spouses and children, including orphans adopted abroad of U.S. citizens and parents of adult U.S. citizens aged 21 and over) are not subject to the family-sponsored cap of 480,000 (Giller [last name withheld], personal communication, June 17, 2011; Monger & Yankay, 2012). According to DHS figures, sponsorship by immediate relatives accounted for 46% of the 1,042,625 green cards issued in FY2010 (Monger & Yankay, 2012). In the vast majority of cases, the DHS may not issue green cards for U.S. military (Sheila [last name withheld], personal communication, June 15, 2011). Permanent residents must first obtain a green card through employment, family, or humanitarian means before applying for U.S. military service (Sheila [last name withheld], personal communication, June 15, 2011).²

Due to the large backlog of green card applications and the limited number of slots available, the United States has implemented a lottery system for foreign nationals to attain green cards. The DHS received a total of 19,672,268 applications for the 2012 green card lottery (“Total Number of DV Lottery Applicants,” 2012). The 2012 lottery was scheduled to grant 55,000 green cards (or 0.28%) of the roughly 20 million applicants who were eligible for green cards (“Diversity Visa [DV] Program,” 1995).

Following the receipt of their green cards, foreign nationals applying for citizenship generally have the same requirements as all applicants, except for a

² In 2009, the U.S. Department of Defense (DoD) implemented a limited pilot program involving 1,000 recruits, which allowed non-green card holders to join the U.S. military in order to cover shortages in mission critical areas, such as medical care and language interpretation (Gilmore, 2008; Preston, 2009; “U.S. Army ‘wants more immigrants,’” 2009).

few caveats. The major difference across applicants is the duration of the DHS-regulated waiting period. Generally speaking, employment-sponsored permanent residents must wait the full mandated five years, whereas individuals who are married to U.S. citizens only have to wait three years to be eligible for U.S. citizenship application (Giller [last name withheld], personal communication, June 17, 2011; Lee, 2012; Mary [last name withheld], personal communication, June 13, 2011). Other family member-sponsored applicants (such as sibling-sponsored applicants) usually have to wait five years (Anthony [last name withheld], personal communication, June 14, 2011)

The entire timeline for obtaining U.S. citizenship, which includes the time to receive an initial green card, the five-year waiting period, and the final citizenship application process, can in many instances take decades to complete. The length of time to receive citizenship depends largely on the type of applicant and the eligibility requirements in place. Generally speaking, a family-sponsored applicant will wait about 17 years to become a U.S. citizen, whereas the process for an employer-sponsored applicant takes roughly eight years (Giller [last name withheld], personal communication, June 17, 2011; Mary [last name withheld], personal communication, June 13, 2011; *Visa Bulletin for June 2011*, 2011). The time it takes to receive U.S. citizenship for permanent residents serving in the military is similar to that of their civilian counterparts; the DHS, however, does not require those serving in the U.S. military to wait the mandatory five years as described in Executive Order 13269 (2002; Mary [last name withheld], personal communication, June 13, 2011).

2. Current Legislation for Service Members

There are currently two sections of the INA (1996) that characterize the expedited citizenship attainment through military service. Section 328 of the INA characterizes naturalization through peacetime service, and Section 329 and 329A explain naturalization by serving during wartime and posthumous naturalization (Lee & Wasem, 2009).

a. Service in Peacetime

Section 328 of the INA applies to all members of the U.S. Armed Forces and those already discharged from service (INA, 1996, § 1439). USCIS states the requirements³ for an individual to qualify for naturalization as follows:

- Be age 18 or older,
- Have served honorably in the U.S. armed forces for at least 1 year and, if separated from the U.S. Armed Forces, have been separated honorably ,
- Be a permanent resident at the time of examination on the naturalization application,
- Be able to read, write, and speak basic English,
- Have a knowledge of U.S. history and government (civics),
- Have been a person of good moral character during all relevant periods under the law,
- Have an attachment to the principles of the U.S. Constitution and be well disposed to the good order and happiness of the U.S. during all relevant periods under the law,
- Have continuously resided in the United States for at least five years and have been physically present in the United States for at least 30 months out of the 5 years immediately preceding the date of filing the application, UNLESS the applicant has filed an application while still in the service or within 6 months of separation. In the latter case, the applicant is not required to meet these residence and physical presence requirements. (“Citizenship for Military Members,” 2010)

In the last decade, after the beginning of Operation Iraqi Freedom, there has been more interest in legislation that extends expedited citizenship benefits (Lee & Wasem , 2009). The National Defense Authorization Act (NDAA; 2003) for FY2004, the Army’s Military Accessions Vital to the National Interest (MAVNI) program and discussions on the enactment of the Development, Relief, and Education Act for Alien Minors (DREAM Act) can be counted among this interest.

³ The eligibility requirements for naturalization are imported directly from the USCIS website.

The NDAA for FY2004 modified the naturalization process for permanent residents serving in the armed forces of the United States. The NDAA amended the INA to allow U.S. military personnel the ability to apply for citizenship after one year of honorable service during peacetime, instead of the prior three-year requirement (Chu, 2006; Hatiangadi, et al., 2005; INA, 1996, subch. III). It also eliminated all application fees for military members when applying for citizenship, effective October 1, 2004 (Chu, 2006; Hatiangadi et al., 2005). The Army's MAVNI program, introduced in 2008, allowed noncitizens who were eligible to enlist—with the exception of the legal permanent resident status requirement—to benefit from expedited citizenship (McIntosh, Sayala, & Gregory, 2011). The DREAM Act, if it comes into effect as opposed to its name, will make undocumented aliens eligible to enlist by legalizing their presence in the U.S. and allowing them to take advantage of expedited citizenship benefits offered to service members (Stock, 2006).

b. Service During Periods of Hostilities

Section 329 of the INA (1996) provides the noncitizen service members with immediate eligibility for naturalization during designated periods of hostilities. The USCIS states the requirements for the applicants under INA 329, as follows. The applicant must:

- Have served honorably in active-duty status, or as a member of the Selected Reserve of the Ready Reserve, for any amount of time during a designated period of hostilities and, if separated from the U.S. armed forces, have been separated honorably
- Have been lawfully admitted as a permanent resident at any time after enlistment or induction, OR have been physically present in the United States or certain territories at the time of enlistment or induction (regardless of whether the applicant was admitted as a permanent resident)
- Be able to read, write, and speak basic English
- Have a knowledge of U.S. history and government (civics)
- Have been a person of good moral character during all relevant periods under the law

- Have an attachment to the principles of the U.S. Constitution and be well disposed to the good order and happiness of the U.S. during all relevant periods under the law. (“Citizenship for Military Members,” 2010)

Section 329 of the INA allows service members to qualify for naturalization without requiring them to be permanent residents, reside continuously for five years, and be physically present in the U.S. (A *Guide to Naturalization*, 2012).

Until 1968, the designated periods of hostilities were specified in section 329 of the INA (1996). Therefore, a revision was required for every new conflict. However, an amendment to the act in 1968 provided the president with the authority to designate periods of hostilities by an executive order allowing the aliens in the military to apply for citizenship under the provisions of INA 329 (Lee & Wasem, 2009). Veterans who served in the military during WWI or during a period beginning September 1, 1939, and ending December 31, 1946, or during a period beginning June 25, 1950, and ending July 1, 1955, or during a period beginning February 28, 1961, are also covered by this section (INA, 1996, § 1440).

c. *Executive Order 13269—Expedited Naturalization of Aliens and Noncitizen Nationals Serving in an Active-Duty Status during the War on Terrorism*

President George W. Bush signed Executive Order 13269 on July 3, 2002, as follows:

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 329 of the Immigration and Nationality Act (8 U.S.C. 1440) (the “Act”), and solely in order to provide expedited naturalization for aliens and noncitizen nationals serving in an active-duty status in the Armed Forces of the United States during the period of the war against terrorists of global reach, it is hereby ordered as follows:

For the purpose of determining qualification for the exception from the usual requirements for naturalization, I designate as a period in which the Armed Forces of the United States were engaged in armed conflict with a hostile foreign force the period beginning on September 11, 2001. Such

period will be deemed to terminate on a date designated by a future executive order. Those persons serving honorably in active-duty status in the Armed Forces of the United States, during the period beginning on September 11, 2001, and terminating on the date to be so designated, are eligible for naturalization in accordance with the statutory exception to the naturalization requirements, as provided in section 329 of the Act. Nothing contained in this order is intended to affect, nor does it affect, any other power, right, or obligation of the United States, its agencies, officers, employees, or any other person under Federal law or the law of nations.

Prior to Executive Order 13269, permanent residents who had served honorably at any time in the armed forces of the United States for at least three years were eligible to apply for U.S. citizenship (Hatiangadi, et al., 2005; INA, 1996, subch. III). The U.S. president will determine the termination of the executive order at a later date; as of February 2013, it was still in effect.

Military service members must still meet the other DHS requirements for citizenship, such as the ability to read, write, and speak the English language and have a basic knowledge of U.S. government and history. Additionally, the executive order did not change the naturalization process for military personnel's family members; the DHS still requires military family members to go through the same process that was in place before the law change.

d. Posthumous Benefits

According to Public Law 101–249, amended to the INA, posthumous citizenship is granted to a noncitizen if the person dies from a disease or an injury while serving honorably in active duty in the armed forces of the U.S. in the period of hostilities defined in section 329 of the INA (INA, 1996, § 1440). The deceased service member is considered a citizen at the date of his/her death. If citizenship is not granted at the date of death, then the next-of-kin may request the posthumous citizenship (“Posthumous Citizenship,” 2011).

3. Number of Naturalized Service Members

Since September 2001, USCIS has naturalized 74,977 members of the military, with 9,773 of those service members becoming citizens during USCIS naturalization ceremonies in 27 different countries. USCIS has naturalized 1,236 military spouses since 2008. USCIS has presented 64 children of members of the military with citizenship certificates since 2009 (*Naturalization Through Military Service*, 2011). Figure 1 shows total number of naturalized service members by year.

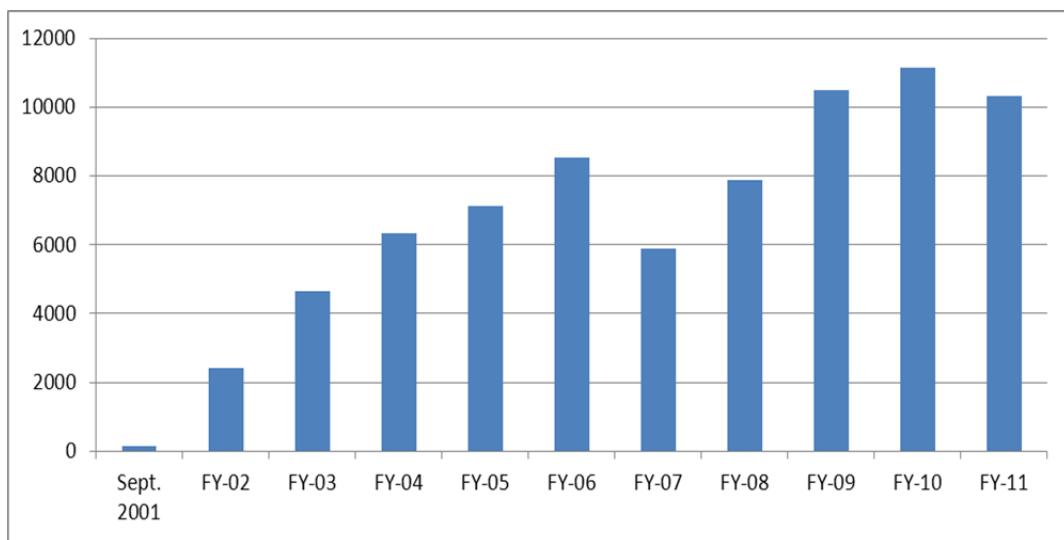


Figure 1. Total Number of Naturalized Service Members
(After *Naturalization Through Military Service*, 2011)

III. PRELIMINARY DATA ANALYSIS

A. DATA SOURCE

The dataset used in this study is based on archival data provided by the Defense Manpower Data Center (DMDC). The DMDC data includes information on enlisted military accessions for all five Services during the period between FY2000 and FY2010. For FY2010, the latest information available is in June 2010, three months before the end of the fiscal year. The dataset consists of information about the individual's Service, sex, race, accession state, pay grade, accession date, prior service indicator, citizenship status, age, and educational level at the time of accession.

Dale and Gilroy (1984) found that the unemployment rate at the time of accession has an effect on the enlistment decisions of the recruits. Since we wanted to add this variable to our analysis and as it was not available in the original DMDC dataset, we extracted this data from the CPS website and appended to the aggregate version of the DMDC data.

The archival dataset is in individual level and contains a total of 1,984,644 records for the five Services. We are interested in the number of monthly accessions during the given period. Both citizen and noncitizen accessions are seasonal in behavior. The seasonality depends on recruiting efforts that differ depending on the time of year and factors that affect the enlistee's enlistment decision, such as school graduation, personal choices, and economic reasons. In order to create a dataset that displays the monthly accessions for the purpose of this analysis, we converted the data from individual-level data to monthly aggregate data. Our model is based on comparing two groups—citizen enlistees and noncitizen enlistees—by using difference-in-difference estimation. Citizen accessions are the control group, and noncitizen accessions are the treatment group. We assumed that the enlistment decisions of both groups were affected by the same factors. The difference-in-difference estimation helps us understand

whether the noncitizen accessions increased after the executive order. By comparing the two groups before and after EO 13269 came into effect, we study whether EO 13269 has had any effect on the number of noncitizen accessions.

B. DATA RESTRICTIONS AND LIMITATIONS

The data from the DMDC is at the individual level. It was not possible to make an analysis to find out the effect of the EO by using this data because accessions as the dependent variable are positive for each individual in the dataset representing a constant. Therefore, we aggregated the data to monthly accessions and used two observations for each month, reflecting the number of citizen and noncitizen accessions separately. Finally, we could use this data in a difference-in-difference estimation to find out the true effect of the executive order comparing citizen accessions with noncitizens.

The DMDC stated that citizenship data was not available prior to FY2000. Therefore, the data relevant to this study begins from this date, and previous data is not included in the study. There are 66 observations for the period before, and 192 observations for the period after the effective date of the EO.

The latest information in the data is from June 2010. Therefore, we do not have the information for the entire FY2010. We excluded FY2010 data while making inferences from yearly analyses.

The citizenship status in the data is described in four categories. These categories are non-U.S. citizen or national, U.S. citizen, U.S. national, and unknown. Since U.S. nationals are not accepted as U.S. citizens according to 8 U.S.C. § 1408 (INA, 1996, § 1408), and as they will be eligible for expedited citizenship, we included them in the noncitizen category. Finally, we dropped 908 unknown observations regarding citizenship status. Also, there are five observations in the gender variable recorded as *unknown*, so we dropped the missing values.

The dataset also includes a variable named Prior Service Indicator. Out of 1,983,707 individuals included in the dataset, 126,871 had served in one of the armed services in the past and, after a break, reaccessed during the period in which the dataset was constructed. We considered dropping the individuals with prior service because their enlistment decision would rely on reasons other than the non-prior service individuals'. The main reason would be their experience and familiarity with military service. This fact could diminish the effect of the EO on their enlistment decisions. On the other hand, we thought that the effect of the executive order might have been greater on them, because they knew the military service better; with the benefits of the executive order, service could just become more attractive. Finally, finding out that the noncitizens with prior service consist of only 3.5% of all noncitizen accessions, and taking into account problems with clearly identifying the direction of the pure effect of having prior service, we decided to keep them in the dataset.

The main goal of the study is to compare the pre- and post-EO periods regarding the citizenship status of accessions. We used July 2002, the date the EO was signed, as the threshold for the EO period. Accessions from October 1999 to June 2002 comprised the pre-EO period, and provided a sample size of 532,856 and 66 observations. Accessions from August 2002 to June 2010 formed the post-EO period and provided a sample size of 1,450,851 and 192 observations.

C. DESCRIPTIVE STATISTICS

In our dataset, the number of total accessions from FY2000 to FY2010 is 1,983,707. Across the whole sample, there are 75,176 noncitizen accessions to all Services of the military in this period, comprising 3.8% of all accessions. As shown in Figure 2, the Army has the largest proportion of all accessions with 41%, followed by the Navy with 22%. The Marine Corps, Air Force, and Coast Guard comprise 18%, 17%, and 2% of all accessions, respectively.

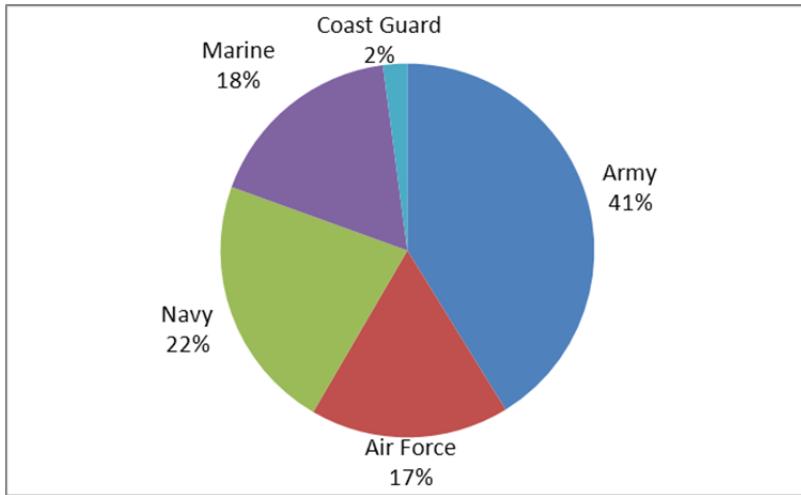


Figure 2. Service Share in Total Accessions

When it comes to the share of Services in noncitizen accessions, the Service shares ranking remains the same, while the magnitudes change slightly. As can be seen in Figure 3, The Army comprises 41% of all noncitizen accessions just as the same proportion in all accessions. Like the Army, the Marine Corps maintains an 18% share for both kinds of accessions. The Navy's share increases to 30% in noncitizen accessions from 22% in all accessions. On the other hand, the share of the Air Force and Coast Guard in noncitizen accessions is smaller than their share in all accessions. The Air Force's share declines from 17% in all accessions to 10% in noncitizen accessions. Similarly, the Coast Guard declines from 2% to 1%.

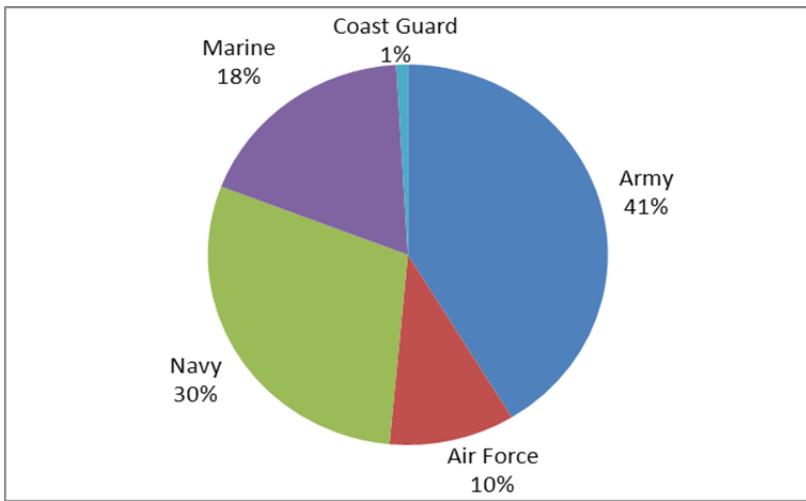


Figure 3. Service Share in Total Noncitizen Accessions

When we look at the shares of citizen and noncitizen accessions within the Services as can be seen in Table 1, the Navy has the largest proportion of noncitizen accessions, followed by the Marines, Army, Air Force, and Coast Guard, respectively.

Table 1. Share of Citizen and Noncitizen Accessions within the Service

	All Services	Army	Air Force	Navy	Marine	Coast Guard
citizen	96.2%	96.2%	97.8%	95.0%	96.0%	98.3%
non-citizen	3.8%	3.8%	2.2%	5.0%	4.0%	1.7%

Table 2 presents the shares of different ethnicities and genders in all citizen accessions and noncitizen accessions, arranged by Services. For citizens, White comprises the largest group in total and in Service accessions. Except for the Marines and Coast Guard, Black representation is more than Hispanics. Asian Pacific Islanders make up about 2–3% of the accessions, while other ethnicities are around 1–2%.

For noncitizens, Hispanics are the largest group represented in total accessions, followed by Asian Pacific Islanders. Blacks and Whites make up about 20% and 13%, respectively. For the Service accessions, except for the Army and Coast Guard, the rank does not change. The Army's and Coast Guard's Black accessions exceed the Asian Pacific Islander accessions. American Indian representation is the lowest in all and in Service accessions.

Table 2. Percentage of Demographic Variables in Total, Citizen and Noncitizen Accessions, by Service

	All Services			Army			Air Force			Navy			Marine			Coast Guard		
	total	ctzn	non ctzn	total	ctzn	non ctzn	total	ctzn	non ctzn	total	ctzn	non ctzn	total	ctzn	non ctzn	total	ctzn	non ctzn
White	63.9	65.9	13.0	63.3	65.2	15.3	69.1	70.3	15.7	55.9	58.4	8.2	69.2	71.5	13.5	74.6	75.4	22.7
Black	15.1	14.9	20.4	16.1	15.9	21.7	15.6	15.5	17.2	18.2	17.9	23.2	9.3	9.1	14.7	6.3	6.2	16.8
Hispanic	12.7	11.7	37.5	11.6	10.6	35.7	9.6	9.1	30.4	14.8	13.8	33.5	15.8	14.3	51.7	12.4	11.9	40.8
Am.Indian	1.7	1.8	0.4	1.0	1.0	0.3	0.6	0.6	0.3	4.5	4.7	0.4	1.1	1.1	0.5	2.0	2.0	0.3
As.Pac.Islander	3.3	2.5	22.9	2.9	2.2	20.4	3.6	3.0	30.0	4.4	3.1	29.5	2.7	2.2	14.1	2.4	2.2	14.7
Other	1.1	1.0	3.6	0.7	0.7	2.8	1.2	1.1	5.3	1.8	1.7	4.3	0.9	0.8	3.6	1.8	1.8	3.9
Unknown	2.1	2.1	2.3	4.3	4.4	3.7	0.4	0.4	1.1	0.3	0.3	0.9	0.9	0.9	2.0	0.5	0.5	0.9
Male	83.4	83.5	80.9	82.8	83.0	78.3	77.1	77.2	72.5	81.8	81.9	80.9	92.8	92.8	91.5	84.7	84.7	84.5
Female	16.6	16.5	19.1	17.2	17.0	21.7	22.9	22.8	27.5	18.2	18.1	19.1	7.2	7.2	8.5	15.3	15.3	15.5

When we compare the educational attainment of the two groups of accessions, the most prominent difference is among baccalaureate degree and alternative high school graduate accessions. The percentage of baccalaureate degree accessions among noncitizens is almost twice the percentage compared to the citizen group. In contrast, alternative high school graduates are twice as high in percentage among citizens as than for noncitizens. The other ratios of educational attainment are similar in the two groups. Figure 4 shows the percentages of education levels within each group.

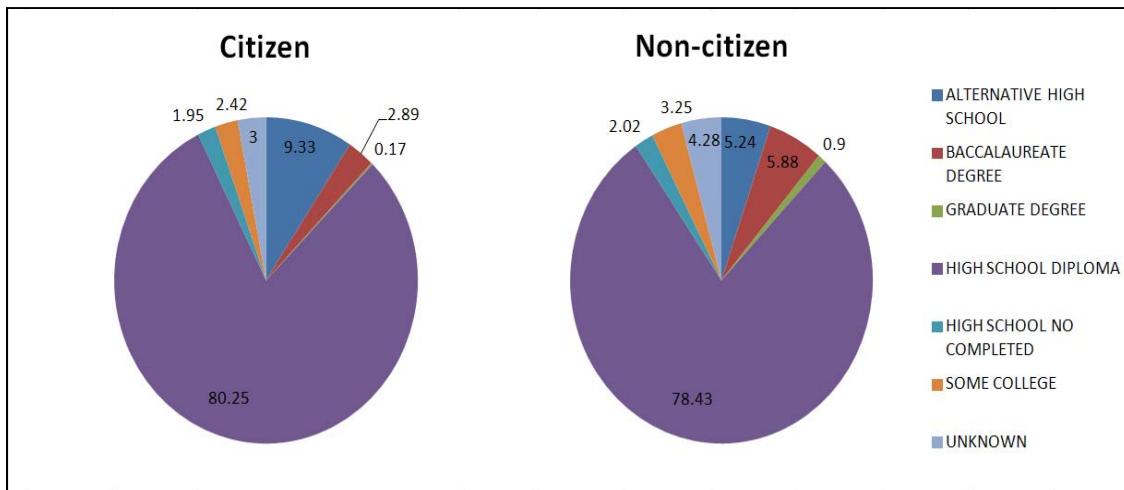


Figure 4. Educational Attainment of Accessions in Percentage, by Citizenship Status

It is remarkable that the number of average monthly noncitizen accessions for all of the variables included in the table, except for the Coast Guard and American Indians, falls during the time period after the implementation of the executive order. By looking at this, we can easily say that the executive order had either no effect or a negative effect on noncitizen accessions. When we check the average monthly citizen accessions for the pre- and post-EO periods, we also observe a decrease for all of the variables, except for the Army, Marines, Hispanics, and American Indians, casting questions on our first inference.

When we dig a little deeper, it is interesting to find an increase in average monthly Army and Marine citizen accessions and a decrease in noncitizen accessions. The reason for this could be the end strength goals of these Services. While all the Services set an overall end strength goal, they do not have a specific recruitment goal for noncitizens. The Army and Marines, as the “fighter” Services with relatively higher casualties, may have less appeal for noncitizens than their citizen counterparts, as noncitizens may choose to abstain from making too great of a sacrifice for a country in which they are not yet citizens. Additionally, an increasing monthly unemployment rate, from 4.6% in the pre-EO period to 6.1% in the post-EO period, might help explain the increase in

the Army and Marine accessions because these Services can be less desirable than the other Services when there is a low rate of unemployment. Table 3 shows the results of these comparisons.

Table 3. Descriptive Statistics

Variables	Complete Time Period			Pre-EO 13269		Post-EO 13269	
	Total	Citizen	Non Citizen	Citizen	Non Citizen	Citizen	Non Citizen
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Total Accessions	15377.6 (4264.9)	14794.8 (4105.8)	582.8 (187.0)	15459.2 (4773.2)	688.0 (222.2)	14566.4 (3851.4)	546.6 (159.1)
Army Accessions	6334.7 (2338.8)	6094.0 (2253.6)	240.7 (101.1)	5950.0 (2530.7)	255.7 (115.6)	6143.5 (2162.5)	235.5 (95.7)
Air Force Accessions	2646.1 (639.6)	2586.8 (622.0)	59.3 (22.2)	2885.4 (599.7)	78.5 (20.2)	2484.2 (598.7)	52.6 (18.7)
Navy Accessions	3400.7 (1126.5)	3229.6 (1066.0)	171.1 (67.9)	3904.3 (1229.3)	220.9 (80.9)	2997.6 (899.7)	154.0 (53.3)
Marine Corps Accessions	2674.2 (1009.9)	2568.0 (976.8)	106.3 (42.3)	2370.3 (869.3)	128.9 (46.1)	2635.9 (1006.3)	98.5 (38.1)
Coast Guard Accessions	321.9 (101.7)	316.5 (100.7)	5.4 (3.1)	349.2 (125.8)	4.0 (1.7)	305.3 (88.5)	5.9 (3.3)
White Accessions	9830.3 (2746.0)	9754.7 (2725.5)	75.6 (24.3)	10343.8 (3105.7)	83.4 (28.2)	9552.3 (2568.7)	72.9 (22.4)
Black Accessions	2320.9 (839.2)	2202.2 (802.0)	118.7 (42.1)	2824.9 (1058.0)	156.7 (47.9)	1988.1 (555.5)	105.6 (30.8)
Hispanic Accessions	1953.8 (582.5)	1735.3 (530.2)	218.6 (81.8)	1511.8 (496.8)	252.9 (99.4)	1812.1 (521.9)	206.7 (71.7)
Asian Pacific Islander Accessions	510.4 (171.8)	377.1 (129.4)	133.3 (48.7)	376.1 (104.6)	159.4 (46.7)	377.4 (137.4)	124.3 (46.3)
American Indian Accessions	266.8 (77.7)	264.7 (77.1)	2.2 (1.9)	259.9 (70.8)	2.0 (1.8)	266.3 (79.4)	2.2 (2.0)
Other Race Accessions	172.2 (88.1)	151.1 (67.6)	21.2 (26.7)	139.6 (41.0)	33.4 (10.3)	155.0 (74.3)	17.0 (29.2)
Accessions with Unknown Race Status	323.1 (281.5)	309.8 (274.2)	13.4 (12.2)	3.1 (2.7)	0.3 (0.6)	415.2 (239.5)	17.9 (11.0)
Male Accessions	12822.5 (3559.6)	12350.8 (3430.7)	471.7 (154.0)	12711.1 (3933.2)	554.1 (184.1)	12227.0 (3253.7)	443.3 (131.8)
Female Accessions	2555.1 (740.1)	2444.0 (708.9)	111.1 (36.5)	2748.1 (859.3)	133.8 (41.7)	2339.4 (620.6)	103.3 (31.0)
Unemployment Rate	5.7 (1.7)	5.7 (1.7)	5.7 (1.7)	4.6 (0.7)	4.6 (0.7)	6.1 (1.7)	6.1 (1.7)
Sample Size	1,983,707	1,908,531	75,176	510,153	22,703	1,398,378	52,473
				Total Pre-EO = 532,856		Total Post-EO = 1,450,851	

Figure 5 shows the monthly citizen and noncitizen accessions during the period. Compatible with the descriptive statistics, there is a noticeable declining trend in the noncitizen accessions, whereas citizen accessions show no sign of increase or decrease. The accessions display seasonality due to the nature of accessions. As one can see, the accessions are at their highest level in the summer season because of new graduates from high schools.

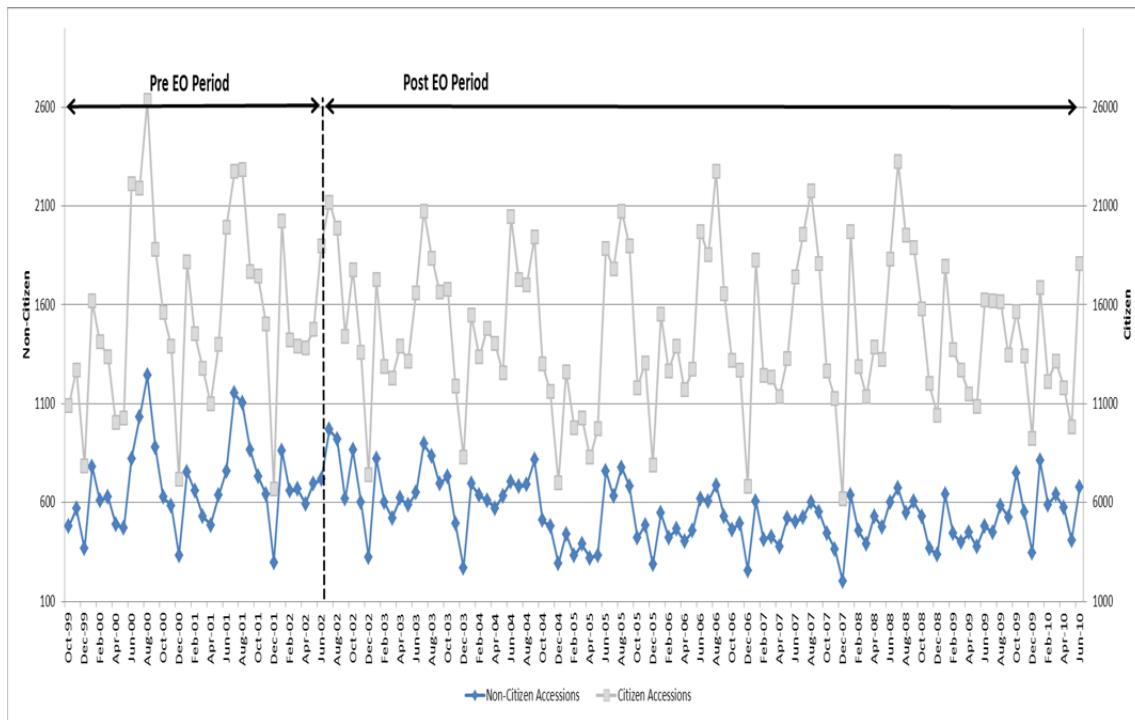


Figure 5. Monthly Citizen and Noncitizen Accessions, FY2000–FY2010

As can be seen in Figure 6, the number of total accessions declined from around 8,500 in FY2000 to about 5,500 in FY2009. If we examine the changes in the number of noncitizens by Service, the Navy displays the largest declining trend, declining 51% in FY2009 compared to FY2000. The Army, which has the largest number of noncitizen accessions among all the Services, shows a sharp decline in FY2005 but later shows an upward trend. Although noncitizen

accessions to the Coast Guard are very small relative to the other Services, the trend is upward until FY2006 and then starts to decline; finally, in FY2009, it turns back to the FY2000 level with a slight 7% increase.

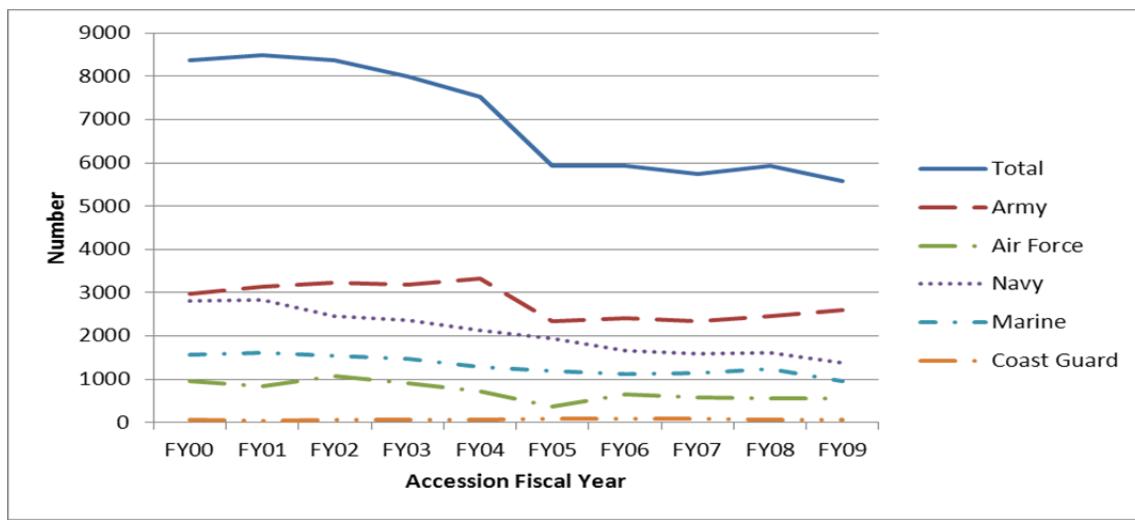


Figure 6. Number of Noncitizen Accessions, by Service and Accession Fiscal Year

Overall, noncitizen accessions comprise 3.8% of total accessions. When we compare noncitizen accessions to all accessions by Service, we find that the Navy has the largest proportion with 5%. The Army and Marines maintain a similar proportion within all accessions with 3.8% and 4%, respectively. On the other hand, the Air Force and Coast Guard account for 2.2% and 1.7%, respectively. As seen in Figure 7, the share of noncitizens has a declining trend for the whole period except for the Coast Guard, which shows an increasing trend.

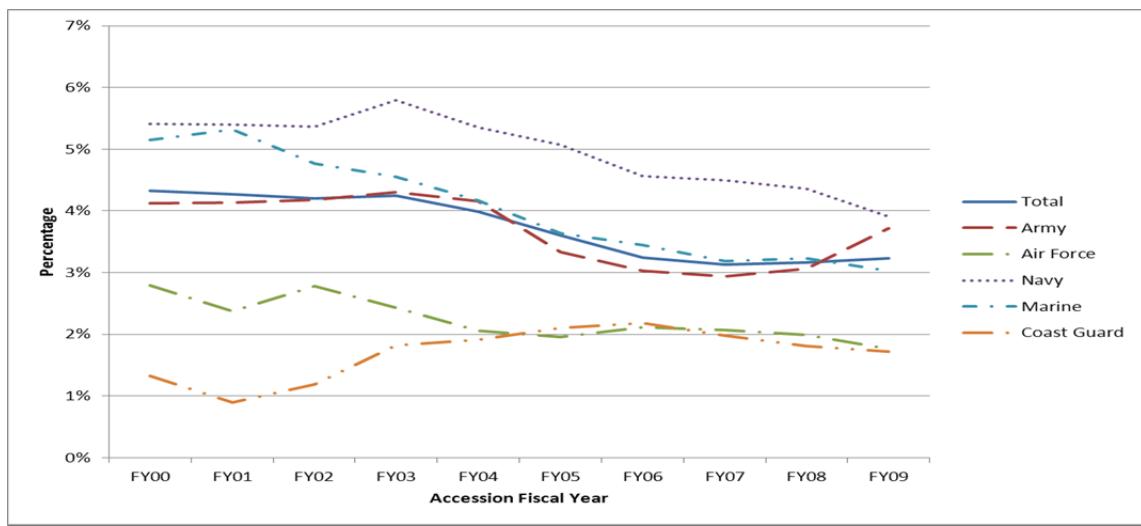


Figure 7. Noncitizen Accessions as a Percentage of Total Accessions, by Service and Accession Fiscal Year

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IV. METHODOLOGY

An Ordinary Least Squares (OLS) regression using difference-in-difference (DD) estimation is used in this analysis. In order to find the effect of a policy on a particular group after its imposition, we need a control group that has similar characteristics to the treatment group but on whom the policy is not imposed particularly. Both the treatment and the control groups should be followed for the same period of time, before and after the policy is imposed.

The general expression of such a model (Woolridge, 2009) is as follows:

$$y_{ct} = \beta_0 + \beta_1 X_c + \beta_2 T_t + \beta_3 X_c T_t + \varepsilon_{ct} \quad (1)$$

where

y_{ct} is the outcome for group c in period t,

c to denote the group indicator,

t to denote the time period,

X_c is a dummy variable taking the value of 1 if the group is the treatment group and 0 if the group is the control group,

T_t is a dummy variable taking the value of 1 in the post-treatment period and 0 in the pre-treatment period,

ε_{ct} is the error term.

The DD estimator is going to be the OLS estimate of β_3 , the coefficient of the interaction between X_c and T_t , which is identified as the treatment group in the after-policy period. This is a binary variable that takes the value of 1 only for the treatment group in the post-treatment period.

We assume that the economic and social conditions and other unobservables are the same for both control and treatment groups during the period. The opportunities that the military offers such as a respected job,

education support, training that is also applicable to civilian life, insurance, and retirement benefits attract both citizens and noncitizens.

The accession model helps us understand the effect of Executive Order 13269 on the noncitizen accessions to the armed forces. Citizen accessions for the whole period are set up as the control group and noncitizen accessions are set up as treatment group. As explained in the theoretical model (1), we created a dummy variable to define the pre- and post-EO period. July 2002, the date the EO took effect, is the threshold for the model. We aggregated both citizen and noncitizen accessions. We also created a dummy variable that defines citizenship. An interaction term between citizenship and post period is created to capture the post-treatment effect.

Equation (2) is the basic model to explain the effect of EO on the noncitizen accessions:

$$\log(\text{accession})_{tc} = \beta_0 + \beta_1 (\text{noncit})_c + \beta_2 (\text{post_EO})_t + \beta_3 (\text{post_EO} * \text{noncit})_{tc} + \beta_4 X_t + \delta_t + \varepsilon_{tc} \quad (2)$$

where

log of accession = log of the monthly accessions to the all Services of the armed forces,

noncit= is a dummy variable, 1 if the accessions are noncitizens and 0 otherwise,

post_EO= is a dummy variable, 1 if the accession date is later than June 2002, 0 otherwise,

*post_EO*noncit*= is the interaction term between post and noncit variables, which is the effect of EO on noncitizens,

δ indicates month fixed effect,

X denotes national monthly unemployment rates,

ε is the error term.

The dependent variable is the log of the total number of accessions for the specific month of the year. We used a semi-logarithmic regression with a transformed dependent variable to eliminate the problems resulting from homoscedasticity and normality. The dataset covers 129 months between October 1999 (the beginning of FY2000) and June 2010 (FY2010). For each month, we calculated the number of citizen and noncitizen accessions separately. Therefore, there are two observations for each month, which doubles the number of observations to 258.

Citizenship status is defined in the dataset for each individual and classified into four categories. These categories are non-U.S. citizen or national, U.S. citizen, U.S. national, and unknown. We deleted individuals with the unknown citizenship status. Since U.S. nationals are not accepted as U.S. citizens, we included them in the non-U.S. citizen or national category. We created two different variables for citizenship. The base case and the control group in the model is citizen. The citizen and noncitizen variables are binary. The citizen variable is defined as 1 if the accessions are citizens and 0 otherwise. The noncitizen variable is defined as 1 if the accessions are noncitizens and 0 otherwise.

Pre- and post-EO variables are binary. Pre_EO is defined as 1 if the accession date is before July 2002, 0 otherwise. Post_EO is defined as 1 if the accession date is in or after July 2002, 0 otherwise. The base case in the model is pre_EO since we are interested in the post period.

The interaction term gives us the difference-in-difference estimation of the executive order after the policy is imposed. Since post_EO and non_citizen variables are both binary, the value of the interaction term will be 1 if the observation is in the post-executive era and belongs to noncitizens. The general concept can be seen in Table 4.

Table 4. Difference-in-Difference Estimator

	Control Group (10/1999-07/2002)	Treatment Group (07/2002-06/2010)	Difference
Pre-EO	β_0	$\beta_0 + \beta_1(\text{noncit})$	$\beta_1(\text{noncit})$
Post-EO	$\beta_0 + \beta_2(\text{post_EO})$	$\beta_0 + \beta_1(\text{noncit}) + \beta_2(\text{post_EO}) + \beta_3(\text{post_EO} * \text{noncit})$	$\beta_1(\text{noncit}) + \beta_3(\text{post_EO} * \text{noncit})$
Difference	$\beta_2(\text{post_EO})$	$\beta_2(\text{post_EO}) + \beta_3(\text{post_EO} * \text{noncit})$	$\beta_3(\text{post_EO} * \text{noncit})$

Unemployment rate (Warner, 2012) is considered as an important factor in the decision of individuals to enlist. If the job opportunities and economic conditions in the civilian sector are good enough, individuals will choose to work on a civilian job since the probability of injury is high in the military. Because it is a strong determinant of the enlistment decision of an individual, we included the national monthly unemployment rates in the model. We expected a positive correlation between unemployment rates and accessions. When unemployment rate is high, the expected number of accessions to the military is also high, and vice versa.

The data is naturally seasonal because different parts of the year yield different accession results. Especially in summer time with new graduates from high school, the number of accessions increases, while in the winter time, there seems to be a noticeable decrease in accessions. We added monthly dummies to remove the effect of a predictable seasonal pattern.

We also conducted separate regressions for each Service to evaluate if there is any difference between Services' noncitizen accessions and their effectiveness in recruiting. Since individuals are free to choose the Service in which they enlist, some Services might attract more people than other ones. This also shows the differences between the Services and even their effectiveness in taking advantage of the mentioned EO. The same logic is used while evaluating the effect.

Table 5. Definition of the Variables

Variable	Description
Dependent variable	
accessions	= number of monthly accessions for citizens and noncitizens in the specific month of the year
Explanatory variables	
Citizenship	
citizen	= 1 if the enlistee is citizen; 0 otherwise
noncitizen	= 1 if the enlistee is noncitizen; 0 otherwise
Pre- and Post-Executive Order	
pre_EO	= 1 if the accession date is before 07/2002; 0 otherwise
post_EO	= 1 if the accession date is after 07/2002; 0 otherwise
Service	
Air Force	= number of citizen and noncitizen accessions to Air Force separately
Army	= number of citizen and noncitizen accessions to Army separately
Navy	= number of citizen and noncitizen accessions to Navy separately
Marine corps	= number of citizen and noncitizen accessions to Marine Corps separately
Coastguard	= number of citizen and noncitizen accessions to Coastguard separately
Unemployment Rate	
Unemp_rate	= national monthly unemployment rates

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V. RESULTS

We conducted separate regressions for the noncitizen accessions to the military and the Services. After setting up the model, we tested for heteroscedasticity by using both White and Breusch-Pagan Tests (Woolridge, 2009). The test results showed that there was significant heteroscedasticity in the model. The problem with the model was that the dependent variable (*accessions*) had small values for noncitizen accessions and large values for citizen accessions. We used a transformed dependent variable with log-level regression and robust standard errors to handle this problem (Woolridge, 2009).

The log-level model specified in the methodology chapter is called semi-logarithmic regression because all the explanatory variables are binary and the dependent variable is transformed (Giles, 2011). The interpretation of coefficients in a semi-logarithmic regression differs from the interpretation of OLS regression coefficients (Giles, 2011). The actual magnitude of the coefficients is calculated by using the formula $100(\exp(\beta)-1)$ (Woolridge, 2009).

A. MILITARY ACCESSIONS

For the total military noncitizen accessions model, we conducted four different regressions including different control variables. The number of observations in the aggregated data was 258. We were mainly concerned about the coefficient of the interaction term (*post*noncitizen*), which gave us the DD estimation. Table 6 shows the results of the regressions for total noncitizen accessions to the military.

Table 6. Military Noncitizen Accessions Regression Results

Variables	(1)	(2) ²	(3) ³	(4) ⁴
noncitizen	-3.113*** (0.0809) [-95.55] ¹	-3.113*** (0.0810) [-95.55]	-3.113*** (0.0322) [-95.55]	-3.113*** (0.0318) [-95.55]
post EO	-0.0467 (0.0643) [-4.56]	-0.0545 (0.0672) [-5.31]	-0.0723*** (0.0254) [-6.97]	-0.0879*** (0.0272) [-8.41]
noncitizen*post EO	-0.177* (0.0916) [-16.22]	-0.177* (0.0917) [-16.22]	-0.177*** (0.0406) [-16.22]	-0.177*** (0.0402) [-16.22]
Constant	9.596*** (0.0574)	9.572*** (0.0754)	9.803*** (0.0368)	9.756*** (0.0520)
Observations	258	258	258	258
R-squared	0.966	0.966	0.991	0.991

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

¹ The numbers in the brackets are actual percentage magnitudes of the coefficients calculated with the formula $100*(\exp(\beta)-1)$.

² Regression (2) includes unemployment rate as a control variable.

³ Regression (3) includes monthly dummies as a control variable.

⁴ Regression (4) includes unemployment rate and monthly dummies as control variables.

Regression (1) showed the results for the model that had no control variables. On average, noncitizen accessions were nearly 96% less than citizen accessions, holding other factors constant. Although statistically insignificant, the accessions dropped by about 5% in the post-EO period. On average, noncitizens accessed 16% less after the EO, holding other factors constant.

In Regression (2), we included national monthly unemployment rates extracted from CPS website. As explained in the methodology chapter, unemployment rate is an important determinant in decision to enlist. The results showed no significant change after including the unemployment rates.

In Regression (3), we accounted for the seasonality that the data showed naturally. We added monthly dummies to eliminate the seasonal pattern in the regression and then the post-EO accessions became statistically significant. On average, after the implementation of the EO, accessions dropped nearly 7%, holding other factors constant. We discuss some of the reasons for this decrease

in the discussion section. The noncitizen accessions after the EO then became more significant ($p < 0.01$) but the magnitude stayed the same, as 16% less.

In Regression (4), we included both national monthly unemployment rates and monthly dummies in the regression. After that, all the coefficients were significant at the 99% confidence interval. Although post–noncitizen accessions stayed the same as in previous regressions, post-EO accessions decreased to -8.41%. Again on average, noncitizens accessed 16% less in the post-EO period.

B. SERVICE ACCESSIONS

We also conducted separate regressions for the Services. The reason that we are interested in Service accessions, separately, is that nearly 40% of accessions occur in the Army, as can be seen from descriptive statistics. So the Army accessions affect the results more than other Service accessions. Also, the Services have their own recruiting offices and policies. Some Services might have a special interest in recruiting noncitizens, while others may not. Also, individuals might be more interested in some Services than in others. In the service accession models, we included both national monthly unemployment rates and monthly dummies as control variables. The problem with heteroscedasticity also occurred with the Service accession models. We used semi-logarithmic regressions with robust standard errors as in the military accession model. Table 7 shows the results for Service accession models.

Table 7. Service Noncitizen Accessions Regression Results

Variables	ARMY ¹	AIR FORCE	NAVY	MARINE	COAST GUARD
non_citizen	-3.190*** (0.111) [-95.88] ²	-3.613*** (0.0479) [-97.30]	-2.885*** (0.0356) [-94.41]	-2.910*** (0.0323) [-94.55]	-4.518*** (0.0954) [-98.91]
post_EO	0.0140 (0.0827) [1.41]	-0.189*** (0.0462) [-17.22]	-0.281*** (0.0280) [-24.50]	0.142*** (0.0283) [15.26]	-0.0211 (0.0639) [-2.09]
non_citizen_post_EO	-0.0994 (0.132) [-9.46]	-0.275*** (0.0695) [-24.04]	-0.0934** (0.0472) [-8.92]	-0.384*** (0.0432) [-31.89]	0.466*** (0.115) [59.36]
Constant	8.787*** (0.111)	7.998*** (0.0882)	8.229*** (0.0528)	8.198*** (0.0649)	6.301*** (0.140)
Observations	258	258	258	258	256
R-squared	0.935	0.975	0.984	0.988	0.963

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

¹ Service regressions include unemployment rate and monthly dummies as control variables.

² The numbers in the brackets are actual magnitudes of the coefficients calculated with the formula $100 * (\exp(\beta) - 1)$.

The Army had the largest share in both citizen and noncitizen accessions but the results were not statistically significant. Insignificant results showed that in the post-EO period, accessions increased around 1.5% but noncitizen accessions dropped about 10%.

All the coefficients in the Air Force accession model were statistically significant at the 99% confidence interval. After the implementation of the EO, on average, accessions dropped 17.22%, holding other factors constant. Noncitizen accessions showed a large decrease of about 24%.

Navy accessions showed a similar trend with the Air Force accessions. There was a nearly 25% decrease in overall accessions after the implementation of the EO. On average, noncitizen accessions after the EO were nearly 9% less, holding other factors fixed.

For the Marines, there seemed to be about a 15% increase in the accessions in the post-EO period, but noncitizen accession dropped by nearly 32%, which is very interesting for us. This might be due to noncitizens' perceptions about a combatant Service. Since the implementation of the EO

coincided with the War on Afghanistan, the probability of dying on the frontline might have affected the noncitizens' decisions to enlist.

Coast Guard accessions showed a slight decrease of 2% after the EO period, but for the noncitizens, there was a significant increase of nearly 60%. The increase for the noncitizens might seem very large, but considering the relatively small size of the Coast Guard and the average noncitizen accessions per months (5.4 individual), this finding did not seem to be significant for our research purposes.

In conclusion, there was a decrease in all Service accessions in the post-EO period, except for in the Marines. This might be due to the Services' end strength goals. On average, noncitizens accessed about 16% less in the same period. Except for the Coast Guard, which showed about a 60% increase, noncitizen accessions dropped, changing from 9% (Navy) to 32% (Marine).

C. JOINT-HYPOTHESIS TEST AND SIGNIFICANCE OF THE MODELS

An F test was used to determine the joint significance of the variables in the model (Woolridge, 2009). We tested for the significance of the variables *post*, *noncitizen*, and *noncitizen*post* in each model to see if they were jointly significant. We also presented R square results of the models to measure the percentage of the variation in the dependent variable depending on the changes in the explanatory variables (Woolridge, 2009). Table 8 shows the test results.

Table 8. The Authors' R Square and F Test Results of DMDC Data

Model	F Test	R Square	Identification of Test Results
(1)	F(3, 254) = 2464.20 Prob > F = 0.0000	0.966	Reject the null. The variables are jointly significant.
(2)	F(3, 253) = 2456.49 Prob > F = 0.0000	0.966	Reject the null. The variables are jointly significant.
(3)	F(3, 243) = 9222.05 Prob > F = 0.0000	0.991	Reject the null. The variables are jointly significant.
(4)	F(3, 242) = 9168.78 Prob > F = 0.0000	0.991	Reject the null. The variables are jointly significant.
Army	F(3, 242) = 1019.88 Prob > F = 0.0000	0.935	Reject the null. The variables are jointly significant.
Air Force	F(3, 242) = 3918.80 Prob > F = 0.0000	0.975	Reject the null. The variables are jointly significant.
Navy	F(3, 242) = 5413.66 Prob > F = 0.0000	0.984	Reject the null. The variables are jointly significant.
Marine	F(3, 242) = 7104.92 Prob > F = 0.0000	0.988	Reject the null. The variables are jointly significant.
Coast Guard	F(3, 240) = 2084.68 Prob > F = 0.0000	0.963	Reject the null. The variables are jointly significant.

In every model, the explanatory variables were jointly significant and the explanatory variables explained more than 90% of the variation in the dependent variable.

D. DISCUSSIONS

We conducted our regression analyses relying on the fact that both citizens and noncitizens have similar incentives to join the military and recruiters do not have any discrimination in recruiting from the two separate groups. Based on these assumptions, the results of the analyses showed that noncitizen accessions declined significantly for all accessions and for the Services, except

for the Army and Coast Guard, relative to their citizen counterparts after EO 13269 was issued. In this section, we present our comments on these results.

First, we thought that this EO was enacted to attract more noncitizens and expand the recruitment pool for the Services. From the results of the analyses, we can easily say that the EO failed to achieve this goal. Since we are interested in the effectiveness of the EO and the effectiveness of the EO can be evaluated by the achievement of predetermined objectives and unconsidered outcomes, the question of better identifying the goals emerged after seeing the results. The effectiveness of the EO can be evaluated by subtracting the total costs from the total benefits. The goals and expected outcomes of the EO were not stated anywhere in the documents, including laws and publications. Therefore, the purpose of the EO has been a matter for discussion. Considering this and the results of the analyses, we thought that we might have made a mistake about the goal of the EO and tried to figure out what other objectives might have been put forth while making the decision to pass this EO.

First, the EO might have been issued just to award the service of noncitizens, with no considerations of the recruitment policies. With the start of the Global War on Terror, followed by the Iraq and Afghanistan conflicts, the number of casualties increased in the U.S. military. Obviously, the conditions are not the same as in peacetime conditions. The enactment of the EO might have focused on the suffering of noncitizen Service members and aimed to increase their motivation and dedication during these hostile conditions. Therefore, it might have been meant to focus on the current Service members, not the potential ones. For this purpose, the performance improvement of noncitizens after the implementation of the EO should be researched to see its effect.

Another objective of the EO might have been to make the U.S. public and the international community aware of the engagement of the U.S. Armed Forces in a hostile conflict through a legal document. The states of the world, as members of the international community, use several ways to show their intentions. These methods include direct and indirect methods. One state can

recognize another state by issuing a declaration stating the recognition directly or can interact with that state within international law to show the recognition indirectly. The enactment of the EO might have focused on gathering the attention of the public inside and outside of the U.S. and prepare bases for the upcoming engagements in Afghanistan and Iraq. So, the effectiveness of the EO in accomplishing this purpose should also be considered when evaluating the overall effectiveness of the EO.

We mentioned two additional probable objectives for the enactment of the EO. These are the objectives that we determined ourselves; however, there may be additional ones. For a better analysis of the success of the EO, the contributions of all the scenarios should be considered in a wholistic approach. Benefits from one scenario might compensate for the disadvantages of the other.

After briefly debating on the alternative objectives of the EO, we focus back on our first assumption that evaluates the effectiveness of the EO regarding the change in the number of accessions. We found that the EO had a negative effect on the number of noncitizen accessions. So, there should be something significantly related to the EO that reduced the motivation of noncitizens to enlist, when compared to citizens.

One reason that the EO had a negative effect on the number of noncitizen accessions could be the publication of war conditions. Once noncitizens became more aware of hostile conditions that the armed forces were engaged in and the greater risks involved in serving in those times, they might have become less eager to make a sacrifice for a country of which they were not even citizens. It is generally considered an honor to serve for one's country and to make a sacrifice for it. Citizen soldiers most likely consider this motivation when making enlistment decisions. They know that they have all the benefits of being a citizen and that their family members and beloved friends and relatives will benefit from their service⁴. The well-being of their country also means the well-being of the people

⁴ Naturalized citizens should be considered an exception to this comment.

surrounding them. In addition, they will be praised by those people for their service. On the other hand, most of the time, noncitizen soldiers with roots from another country are alone in the U.S. or possibly with some immediate relatives who do not have the benefits of citizenship. The rest of the people they care about might be located outside the U.S. They might even be considered to be betraying their own countries by joining another country's armed forces, rather than being praised for this decision. In peacetime conditions, noncitizens might join the military as an occupation and as a way to survive. In wartime conditions, as revealed by the EO, their motivation to enlist might be reduced, considering the relative disadvantages of making a sacrifice for the country.

Another reason that the EO had a negative effect on the number of noncitizen accessions could be the publication of casualties following the Afghan and Iraq wars and the significant number of documents available on the web and social media about the use of noncitizens as "cannon fodder" in the Afghanistan and Iraq wars. Though it cannot be proved, this might have affected enlistment decisions of the noncitizens.

One other reason for the negative effect of the EO could also be the perceived benefits of the executive order. The only substantial benefit of the executive order is less time spent on attaining citizenship. In the absence of the executive order, according to current legislation, a service member needs to serve for one year before filing an application for citizenship. A service member might not care about this because he signs a contract for at least four years at the time of enlistment. The average time to attain citizenship after filing an application is similar for all service members. Therefore, one year less to attain citizenship might not be a valuable benefit for noncitizens. Also, the executive order does not bring any direct benefits to the family members of the noncitizen. The family members will become eligible for citizenship after the service member attains citizenship, either under the provisions of the executive order or not. The family members must follow the usual procedures to apply for citizenship, and the requirements for such citizenship takes a long time.

Finally, the official and unofficial changes in the recruitment policies of the Services and the changes in the recruiting ways of the recruiters can be another reason or the negative effect of the EO. After the EO, the Services might have been more inclined to recruit citizens rather than noncitizens relying on the idea that the soldiers who will do their best to defend their countries in times of hardship will be citizen soldiers. Relatively more paperwork is involved in recruiting noncitizens, which might also have discouraged recruiters from recruiting more noncitizens, though there is no specific evidence of this.

After finding that the results were not compatible with our expectations, we also questioned our method of analysis. The assumption that the enlistment motivations of citizens and noncitizens are the same might not be completely correct. Although there are similarities in many aspects, any dissimilar motivations not included in the model might have biased the results. This casts a question on the accuracy of the interpretation of this analysis.

Our study evaluated the number of accessions by using accession data. This kind of data restricted us from using data on the unaccessed applicants and even the overall eligible population. What if the population of eligible noncitizens decreased throughout the time covered in our analyses, or what if the eligible citizen population increased much more than the eligible noncitizen population? We know that the immigrant population is growing in the U.S., but this might not be proportionate to the growth of the enlistment-eligible population. Although very small, there is a possibility that the percentage of noncitizen accessions in the eligible population either increased or remained at similar levels during this time after accounting for the eligible citizen and noncitizen population. This question cannot be answered without specifying the enlistment-eligible noncitizen population.

We thought that the awareness of the EO would be the most important factor for the EO to have an affect on noncitizen accessions. In order to find how much the implementation of the EO was advertised and debated in society, we decided to look into news articles published in the U.S.'s written media. We used

the Lexis Nexis Database for this research and searched different keywords that would be relevant to the content of the EO, in the time period between one year before and three years after the EO. We found that the keywords *Expedited Citizenship and Military* returned the most relevant results. Due to the very low number of articles from this search, we expanded our search to the secondary keywords—*Naturalization and Military* and *Citizenship and Military*. To be able to understand the magnitude of the published news articles by using the above keywords, we decided to compare them with a general keyword, *U.S. Military*. Figure 8 represents the results of this research. The results basically showed that the EO was not promoted enough to create countrywide awareness.

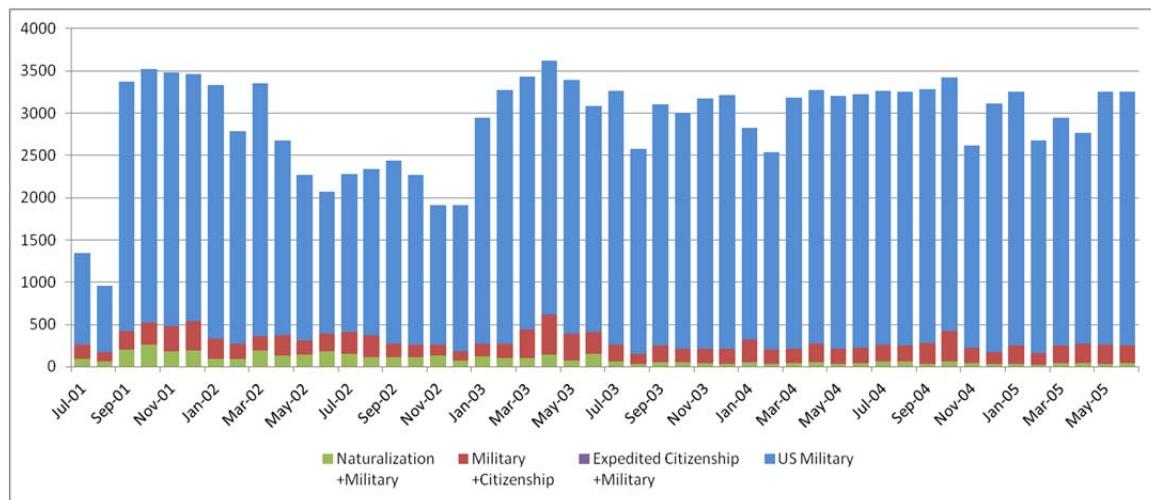


Figure 8. Number of News Articles in U.S. Newspapers and Wires by Different Keywords

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VI. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

Especially in wartimes, the manpower needs of the armed forces of a country reach the highest point. Although in some cases, technology has replaced manpower in the modern world, the importance of manpower cannot be ignored. In U.S. history, the reward of citizenship in return for military service has become an important tool for policy makers. As explained in the background chapter, citizenship has been used to attract more people to meet the needs of the armed forces and to reward noncitizens for their honorable service, beginning with the Revolutionary War. Many acts of legislation and executive orders have been passed through Congress and signed by U.S. presidents.

Noncitizens provide important characteristics to the armed forces of the U.S. There is an increased need for noncitizens in the military, considering the diverse backgrounds, foreign language abilities, and better adaptability to the military environment of noncitizens; the growing immigrant population within the U.S.; the challenges facing the armed forces in recruiting qualified manpower; and the role of the U.S. military around the world.

The U.S. is also aware of the importance of noncitizens and President Bush signed an executive order allowing active-duty noncitizens to receive expedited citizenship, even after one day of honorable service. The amendment to the NDAA (2003) in 2004 also reduced the peacetime waiting period to one year for active-duty noncitizens.

In this study, we wanted to evaluate the effect of the recent Executive Order 13269 on noncitizen accessions to the military. We started with the question “Did the reward of citizenship accomplish the expected outcome and attract more noncitizens to the armed forces?” We used an OLS regression with difference-in-difference estimation. Citizen accessions were set up as a control group and noncitizen accessions were the treatment group. Our regression

analyses results showed that, for the military, after the implementation of the executive order, noncitizen accessions dropped by 16%. In the same period, accessions dropped by 8.41%.

Service-related accessions showed a similar trend. In the post-EO period, accessions dropped by 17.22%, 24.50%, and 2.09% for the Air Force, Navy, and Coast Guard, respectively. The Marines were the exception: Marines accessions showed an increase of 15.26%. When we looked at noncitizen accessions after the implementation of the EO, Air Force accessions dropped by 24.04%, Navy accessions dropped by 8.92%, and Marine accessions dropped by 31.89%. In contrast, Coast Guard accessions showed an increase of 59.36%. This large increase was not meaningful in our research because the average noncitizen accession to the Coast Guard was only about 5 individuals per month. For the Army, the results were insignificant.

It is obvious that after the implementation of the EO, noncitizen accessions dropped significantly. In the results chapter, we discussed the potential reasons for this outcome, but statistically significant results showed that the EO did not work, as far as increasing noncitizen accessions.

B. RECOMMENDATIONS

We have observed that there are some factors that affected the noncitizen accessions negatively more than the EO. Our key recommendations from the analysis are listed as follows:

- The Services should establish an effective way of recruiting noncitizens because the study made by McIntosh, Sayala, and Gregory (2011) found that recruiters have no special interest in recruiting noncitizens. Recruiters in the armed forces could be briefed about the EO and its benefits to noncitizens.
- The advertisement of the EO does not seem to be enough to capture public attention. Our findings show that the EO is not discussed within society enough because the number of news articles related to the EO was very small. Even most Internet sources named the EO as a tool to find “cannon fodders” for the ongoing wars in which the U.S. is involved.

- The benefits provided to eligible noncitizens should be broadened to include the family members of noncitizens. The family members would become eligible for citizenship after the service member attains citizenship. The family members must follow the usual procedures to apply for citizenship, and the requirements for such citizenship takes a long time.
- Legal Permanent Residency is a requirement to apply for enlistment. If the requirement for LPR could be eliminated, even for undocumented noncitizens to become eligible for enlistment, the applicant pool would be greater than the current one.

C. AREAS FOR FUTURE RESEARCH

- The DMDC data did not extend far enough back in time before the EO. Expanding the time period before the executive order will probably yield better results.
- We could not find a study about the motivations of active-duty noncitizens. Determining the effects of noncitizens' decisions to enlist to the military would help to better understand them and their priorities.
- A survey could be conducted about the perception of the EO amongst noncitizens to better understand the policy and its implications.

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